AMENDMENTS TO THE CLAIMS

1. (currently amended): A method for generating a clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a CPU interrupt signal in accordance with a sound data that is read from a CPU memory; and

emitting to a speaker of the electronic device said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein a period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to a period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

2. (currently amended): A method for generating a clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a period of a CPU interrupt signal in accordance with a period T of the sound data that is read from a CPU memory; and

emitting to the speaker said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein the period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

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3. (currently amended):   A method for generating a clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a period of a CPU interrupt signal in accordance with a period of the sound data that is read from a CPU memory; and

emitting to the speaker said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein in said altering step the period of the CPU interrupt signal is dynamically altered in correspondence with a period T of said sound data, the period of the CPU interrupt signal is dynamically altered, and the period of said CPU interrupt signal is dynamically altered to T/n where n = 2, 3, ..., and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

4. (currently amended):   A method for generating a clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a period of a CPU interrupt signal in accordance with a period of the sound data that is read from a CPU memory; and

emitting to the speaker said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein in said altering step

the period of the CPU interrupt signal is dynamically altered in correspondence with period T of said sound data, and

the period T of said CPU interrupt signal is dynamically altered to T/2, and wherein

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the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/2.

5. (currently amended): A method for generating a clear playback sound, in an electronic device including a CPU, a timer unit and a speaker, the method comprising the steps of:

reading image data and audio data under CPU control;

controlling said timer unit that generates a CPU interrupt signal in accordance with said read audio data to dynamically alter said CPU interrupt signal; and

emitting to the speaker said sound data obtained in accordance with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree, the burden on the CPU is reduced, and a playback sound is generated from the speaker;

wherein the period of the CPU interrupt signal is dynamically altered in correspondence with a period T of said sound data and the period t of said CPU interrupt signal is dynamically altered to T/n where n = 2, 3, ..., and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

6. (currently amended): An electronic device comprising:

a timer unit that generates a CPU interrupt signal; [[,]]

a CPU that specifies sound data by the timing of said CPU interrupt signal;[[,]]

a D/A converter that changes said sound data to an analog signal; [[,]] and

a speaker that emits sound that corresponds to said analog signal;

said CPU controlling said timer unit in accordance with a period T of said sound data, dynamically altering a period of said CPU interrupt signal, causing a switching timing of

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said sound data and the period of said CPU interrupt signal to agree, and generating a clear playback sound; [[:]]

wherein the period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

7. (currently amended):   An electronic device comprising:

a timer unit that generates a CPU interrupt signal; [[,]]

a CPU that specifies sound data by the timing of said interrupt signal; [[,]]

a D/A converter that changes said sound data to an analog signal; [[,]] and

a speaker that emits sound that corresponds to said analog signal;

said CPU controlling said timer means in accordance with a period of said sound data, dynamically altering a period of said CPU interrupt signal, causing a switching timing of said sound data and the period of said CPU interrupt signal to agree, and generating a clear playback sound;

wherein the period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

8.(original):   The electronic device according to claim 7, wherein the period of said CPU interrupt signal is dynamically altered to $T/2$.

9. (currently amended):   An electronic device comprising:

a clock unit;

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a CPU;

a down-counter;

a timer unit connected to said clock unit and generates an interrupt signal using said down-counter;

an interrupt controller connected to said timer unit;

said CPU being connected to said interrupt controller;

a bus controller connected to said CPU;

a D/A converter connected to said bus controller;

an amplification unit connected to said D/A converter;

a speaker connected to said amplification unit; and

an electronic means causing said CPU to control said down-counter based on the period of the sound data, generate said interrupt signal, determine the sound data based on said interrupt signal, emit the sound data via said bus controller and said amplification unit to said speaker, and generate a clear playback sound, wherein said CPU dynamically alters the period T of said interrupt signal to T/n (where $n= 2, 3, ...$) when the period of said sound data is T; and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n by said CPU.

10. (cancelled)

11. (currently amended):   The electronic device according to claim ~~10~~, 9 wherein said CPU dynamically alters the period T of said interrupt signal to $T/2$ when the period of said sound data is T.

12. (original):   The electronic device according to claim 9, which is a portable electronic device that is detachably connected to a parent machine and can play a game independently when detached from said parent machine.

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13. (currently amended): An entertainment system comprising a portable electronic device which is a child machine that is detachably mounted to a parent machine, and an interface for making an electrical connection to said parent machine, said portable electronic device comprising:

a CPU;

a timer that generates a CPU interrupt signal;

said CPU specifying a sound data by the timing of said CPU interrupt signal;

a D/A converter that converts said sound data to an analog signal; and

a speaker that emits sound corresponding to said analog signal;

wherein the period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to a period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

14. (currently amended): An entertainment system comprising a portable electronic device which is a child machine that is detachably mounted to a parent machine, and an interface for making an electrical connection to said parent machine, said portable electronic device comprising:

a CPU;

a timer that generates a CPU interrupt signal;

said CPU specifying a sound data by the timing of said interrupt signal;

a D/A converter that converts said sound data to an analog signal; and

a speaker that emits sound corresponding to said analog signal;

wherein a period of said CPU interrupt signal is dynamically altered to T/n (where T is a period of the sound data and n = 2, 3, ...), and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and

the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

15.(currently amended): A method for generating a clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a CPU interrupt signal, that has been generated by a timer using a down-counter, in accordance with a sound data that is read from a CPU memory; and

emitting to a speaker of the electronic device said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein said sound data has a period and wherein said CPU controls said down-counter based on the period of said sound data;

wherein a period of said CPU interrupt signal is dynamically altered to T/n (where n=2, 3,...) with respect to a period T of said sound data; and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

16. (currently amended): A method for generating clear playback sound in an electronic device including a CPU and a speaker, the method comprising the steps of:

dynamically altering a period of a CPU interrupt signal, that has been generated by a timer using a down-counter, in accordance with a period T of the sound data that is read from a CPU memory; and

emitting to the speaker said sound data obtained in connection with said CPU interrupt signal, wherein the timing between said sound data and the timing of said CPU interrupt signal are made to agree with each other to provide a clear playback sound;

wherein said CPU controls said down-counter based on the period T of said sound data;

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wherein the period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

17. (currently amended): An electronic device comprising:

a timer unit that generates a CPU interrupt signal using a down-counter; [[,]]

a CPU that specifies sound data by the timing of said CPU interrupt signal; [[,]]

a D/A converter that changes said sound data to an analog signal; [[,]] and

a speaker that emits sound that corresponds to said analog signal;

said CPU controlling said down-counter in accordance with a period T of said sound data, dynamically altering a period of said CPU interrupt signal, causing a switching timing of said sound data and the period of said CPU interrupt signal to agree, and generating a clear playback sound;

wherein a period of said CPU interrupt signal is dynamically altered to T/n (where n = 2, 3, ...) with respect to a period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

18. (currently amended): An entertainment system comprising a portable electronic device which is a child machine that is detachably mounted to a parent machine, and an interface for making an electrical connection to said parent machine,

said portable electronic device comprising:

a CPU;

a timer that generates a CPU interrupt signal using a down-counter;

said CPU specifying a sound data by the timing of said CPU interrupt signal;

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a D/A converter that converts said sound data to an analog signal; and

a speaker that emits sound corresponding to said analog signal;

wherein the CPU controls said down-counter based on a period of said sound data, and dynamically alters a period of said CPU interrupt signal, causing a switching timing of said sound data and the period of said CPU interrupt signal to agree, and generates a clear playback sound, wherein the period of said CPU interrupt signal is dynamically altered by said CPU to T/n (where n = 2, 3,...) with respect to period T of said sound data, and wherein

the timing of interrupt corresponds to a rise or fall of a sound waveform of said sound data and discrepancy between the timing of said period of said CPU interrupt signal and the timing of the rise and fall of the sound waveform is substantially eliminated by said dynamically altering said period of said CPU interrupt signal to T/n.

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